



What Goes Around Comes Around: Learning Sentiments in Online Medical Forums

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Abstract

It has been shown that online health-related discussions significantly influence the attitudes and behavioral intentions of the discussion participants. Although empirical evidence strongly supports the importance of emotions in health-related online discussions, there are few studies of the relationship between a subjective language and online discussions of personal health. In this work, we study sentiments expressed on online medical forums. Individual posts are classified into one of five categories. We identified three categories as sentimental (encouragement, gratitude, confusion) and two categories as neutral (facts, endorsement). A total of 1438 messages were annotated manually by two annotators with a strong inter-annotator agreement (Fleiss kappa = 0.737 when the posts were annotated in the context of discussion and Fleiss kappa = 0.763 when the posts were annotated as individual entities). Using machine learning multi-class classification approach, we assess the feasibility of automated recognition of the five sentiment categories. As well as considering the predominant sentiments expressed in individual posts, we analyze transitions between sentiments in online discussions.